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THE NATIONAL GALLERY.—No. XIV.

ST. JEROME DOING PENANCE. (GUIDO.)

St. JEROME, one of the most celebrated fathers of the church, was born at Stridon, a city of ancient Pannonia, about the year 381. Donatus, whose commentaries upon Virgil are well-known and highly appreciated by the literati, was his tutor; and under this talented master he made

rapid progress in all that related to the *belles lettres*. Rhetoric was also one of his ardent studies, for which he assigned as a reason, that the generality of Christians were despised as a rude, illiterate set of people, and that the unconverted portion of the world would be soon drawn over to



ST. JEROME DOING PENANCE.

Christianity, if true religion were set off and enforced in a manner suitable to its dignity and majesty. When he had finished his education at Rome, and reaped all the fruits which books and good masters could afford, he resolved, for his further improvement, to travel. He was baptized, when an

adult, at that city; then he pursued his way to France, remaining a considerable time in every town through which he passed, in order to have an opportunity of examining the public libraries, and of visiting the men of letters with which that country then abounded. After travelling for a considerable

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time, and having seen all that he deemed worthy of his attention, he returned to Rome, and began to deliberate on the course he ought to pursue. After consulting a few of his friends, he determined to retire into some remote region, which resolution he carried into effect, taking nothing but his books with him. Having passed through Dalmatia, Thrace, and some provinces of Asia Minor, he visited Jerusalem—a journey which was then considered a necessary act of religion. He then went to Antioch, and from thence to several cities and countries, with all which he was dissatisfied on account of the customs and manners of the people. At last, he settled in a fruitful desert of Syria, which was scarcely inhabited by anything but wild beasts. This was rather a recommendation than otherwise to Jerome; for, as Erasmus states, “He thought it better to combat with wild beasts and wild men, than live with such Christians as were usually found in great cities—men half pagan, who were Christians in nothing but in name.”

When Jerome entered this monastic life, he was in his 31st year. The Holy Scriptures became his constant study, which, it is said, he got by heart. The Oriental languages—the keys, as he called them, to the true sense and meaning of Holy Writ—also engaged his attention, and which he learned privately from a Jew, lest he should offend his brethren. After spending four years in this laborious mode of life, his health became affected, and he was obliged to return to Antioch. From this time his reputation for piety and learning began to spread; and the factions into which the church was then divided used all their influence to draw him over. Some of them, stung with vexation at their disappointment, raised infamous reports and calumnies against him. Besides several other things, they accused him of having a criminal passion for an eminent matron, Paula, in whose house he had lodged during his residence at Rome, and who was as illustrious for her piety as she was distinguished for her birth and the dignity of her rank; for this and other reasons, he left Rome, accompanied by a number of monks and ladies, went to Antioch, thence to Jerusalem, and the following year to Egypt.

He now fixed on Bethlehem, as best suited to that course of life which he intended to pursue, for his abode, where he was met by Paula, and other ladies of quality, who had followed him from Rome with the view of devoting themselves to a monastic life. His fame for learning and for piety became so great, that numbers of both sexes flocked to him from all parts of the world to be trained up and educated by him. This induced the pious Paula to found four monasteries;

three for females, over which she presided—the fourth for males, which was committed to the care of Jerome. Here he enjoyed all that repose of which he had been so long in pursuit; and here he laboured hard in composing those works which are invaluable to all who have a regard for sacred antiquity. This great scholar and worthy divine died in 422, in the ninety-first year of his age.

This is a brief outline of the life of that man whose portrait engaged the pencil of the great artist, Guido. Of the painting we cannot speak much in its praise—that is to say, if it was intended to represent that pell-mell and resolute father of the church, for it lacks that intellectual cast of countenance which a man such as St Jerome no doubt possessed. That it is the portrait of the celebrated divine many will not give credence, and they go so far as to affirm that it is simply an aged, but vigorous and devout hermit, near the entrance of his rocky cell, resting his left arm on a skull, that he may remember death, and contemplating a crucifix, that he may inherit eternal life.

René Guido, the memorable artist, was born at Bologna in 1547, and at an early age became the pupil of Denis Calvart, but afterwards entered the school of the Carracci, and was considered, with the exception of Domenichino, the principal disciple of that celebrated seminary. His masters, perceiving the extraordinary talents of the young artist, became jealous of him, lest he should equal, if not surpass them; and Lodovico attempted to keep down his aspiring genius, by setting Guercino against him as a rival; while Annibale, with an equally ungenerous spirit, censured Altissimo for having brought him amongst them. Notwithstanding this, the young artist,

“Bent on success—thirsting for fame,”

pursued his course with unremitting ardour, examined the excellencies of other great painters, profited by them all, and framed for himself a style, all gentleness and softness, a style directly opposed to that of Caravaggio. Skilful in execution, he found no difficulty in imitating whatever he desired; but in those imitations he took care to avoid defects, and whatever he found good in either, he improved both in expression and colouring. The tender, the pathetic, and devout, were the characters in which he so admirably excelled, and which distinguished him from all other painters. In his manner there is a silvery smoothness that gains upon all; while the melting eyes, the pious and humble resignation of his Madonas, excite wonder and admiration. One of his heads, that of our Saviour, with the crown of thorns, is inimitable for its expression of pious resignation under acute suffering of mind and body. This one, as well

as several others, are little inferior to those of Raphael, either in correctness of design or propriety of expression. His draperies are always disposed with large folds, and are contrived with singular judgment, to fill up the void spaces. They are free from stiffness or affectation, and noble and elegant in appearance. There is, however, something theatrical in his attitudes, which detracts from the effect of the whole. Mr. Fuseli, in speaking of Guido's works, says—"His attitudes seldom elevate themselves to the fine expression and graceful simplicity of the face. The grace of Guido is the grace of theatre; the mode, not the motive, determines the action. His Magdalens weep to be seen, his Hero throws herself over Leander, Herodias holds the head of her victim, his Lucretias stab themselves with the studied airs and ambitious postures of buskinéd heroes. It would, however, be unjust not to allow that there are exceptions from this affectation in his works. Helen departing with Paris, is one which alone might atone for every other blemish. In her divine face, the sublime purity of the Niobe is mixed with the charms of the Venus; the wife, the mother, give, indeed, way to the lover, but spread a soft melancholy, which tempers her fervour with dignity." This expression is supported by the careless, unconscious elegance of her attitude; whilst that of Paris—stately, courteous, insipid—gives him more the air of an ambassador, attending her as proxy, than that of a lover carrying her off for himself." The colouring of Guido is generally clear and pure; but that of his later performances is livid, while his shadows partake of a greenish hue.

Unfortunately, when advanced in life, this talented artist conceived a taste for gaming, which ultimately reduced him to extreme poverty. Distressed circumstances affected his mind, and brought on a languishing disorder, of which he died at Bologna, in 1642, at the age of sixty-seven. In person, he was extremely handsome; indeed, so much so, that Lodovico Carracci, when painting his angels, always took him for a model. He was gentlemanly in his bearing, exceedingly obliging, and respected by all who knew him.

MARGARET DE LACY.

A LEGEND OF THE MIDDLE AGES.

"I've heard thee darkly speak of an event
Which happen'd hereabouts, by this same tower."

MANFRED.

In the latter part of King John's reign, a solitary female became the inmate of a rudely constructed hut, on the southern confines of the Forest of Acornbury, in Herefordshire. None knew who she was,

nor from whence she came; and the suddenness of her appearance in that part of the country, together with the mystery attending her means of subsistence, and the haughty reserve with which she repelled the advances of those whose curiosity or compassion led them to her abode, soon made her an object of mingled terror and veneration. It was asserted that she was a sorceress, that she possessed a power of recalling the past and foretelling the future; and, ere long, wild tales were in circulation of the unearthly voices that had been heard conversing with her, and the supernatural shapes she had been seen to assume. These tales, confidently repeated and eagerly listened to, at length reached the ears of Margaret de Lacy, the cousin and ward of Richard de Neville, Lord of Acornbury. In addition to the tedium attending a residence little better than an imprisonment in the Castle of Acornbury, bereft of her parents, denied all intercourse with the world without, surrounded with a licentious soldiery—the unhappy consequences of the civil war and anarchy then prevailing in England.—Margaret de Lacy had the misery of finding herself in the power of a man she detested, who had sworn that he would compel her to become his wife; while her heart and her plighted troth were given to another, who, alas! was powerless to rescue her, though devoted to her service. The rival suitors were cousins, and, which is frequently the case, in proportion to the nearness of their relationship was their hatred to each other. Reginald Grey, the successful lover, was a grandson of the celebrated Henry de Longchamp, and brother of Lord Grey de Wilton. With nothing but his good looks and his valour to recommend him, he had from his earliest youth been an object of preference to the beautiful Margaret, whose father, perceiving their attachment, but more anxious for his daughter's aggrandizement than careful of her happiness, on his death-bed consigned her to the guardianship of his eldest nephew, the Lord of Acornbury, with his sanction to their marriage. For months Richard de Neville alternately wearied his unfortunate ward with his importunities, or terrified her with his threats. In the extremity of her despair she had thrown herself upon the king's mercy, but with John, cupidity, and not generosity, was the principal incentive to action, and the goody array of twenty palfreys with which the Lord of Acornbury purchased his sovereign's mediation was more influential than the tears and prayers of the lady, or aught that Reginald Grey could offer in opposition. Such was the situation of Margaret upon the arrival of the sorceress in her vicinity; and with the natural yearning of humanity to dive into futurity, together with the despondent con-

viction that, if revealed to her, her future fate could hardly be worse than her present condition, she resolved to visit the recluse, and question her as to her destiny. To effect her purpose, she found it would be necessary to leave the castle at dusk, in order to elude her guardian's vigilance. Having by dint of gold and promises gained the assistance of one of the household, she disguised herself to the best of her ability, and, buoyed up by the excitement of her enterprise, quitted the castle by a postern-gate, at an hour when she usually retired to rest. About a mile of wild, uncultivated ground intervened between Acornbury Castle and that part of the forest where dwelt the reputed sorceress. Over this ground her attendant, whose services she had secured, conducted her, but he resolutely refused to enter the forest at that hour, or approach nearer to the mysterious abode. He had, he declared, done all that he had engaged to do; the distance being now but a few hundred yards, he would await her return. Conjuring him not to forsake her, and promising to rejoin him quickly, Margaret seized the lantern with which her guide had provided himself, and hurried on, too much agitated and excited to experience fear. Her way led through the most impenetrable part of the forest, but, although it was the end of autumn, the evening was calm and mild, and the leaves having fallen in profusion from the trees, gave ample scope for the moon, which had just arisen, to illumine the secluded path. In a few minutes she had attained her destination, unquestioned and unharmed, and for the first time a vague feeling of terror overcame her. A superstitious recollection that she was about to resort to unhallowed means for eluding or overcoming her misfortunes had nearly turned her from her purpose. She paused; all was silent as death; but the wretched hovel, erected against the side of a rocky bank of the rudest materials and smallest dimensions, looked as if its inmates should be more an object of compassion than of terror, as if she rather needed the assistance and protection of others than was capable of bestowing either. The appearance of misery and poverty reassured Margaret; she began to doubt the reports she had heard, and to sigh over her own crudity. She knocked gently at the door, it opened apparently of its own accord, and she found herself in a room, if room it could be called, which corresponded exactly with the exterior of the cottage; the mud walls were bare, the floor strewn with dirty rushes, and on a wooden bench, the only piece of furniture it contained, lay some half-broken cooking utensils. This cheerless kennel, for it merited no better name, was untenanted; but at its extremity there was a second door, which, upon Margaret's

entrance, flew back, disclosing an inner apartment, from whence streamed a light of a pale green colour. Sensible that she had gone too far to recede, and with all her fears reviving, she advanced towards the interior of the mysterious abode. Scarcely had she reached the threshold, when a tall figure, completely enveloped in black, the face likewise concealed by a veil of the same sombre hue, over which the green light cast a ghastly and unearthly glare, stood before her.

"Margaret de Lacy," said a sweet, low voice, surprising by its contrast with the formidable apparition that it added to her dismay, "the purport of thy visit is not unknown to me, but thy time for questioning is brief; peril awaits a long continuance here." Then, after a moment's pause, receiving no answer—for the terrified girl in vain essayed to speak,—the voice continued, "Shall I tell the lady that which she would know? Thou shalt die the widow of Reginald Grey, but never live his wife; and on thy bridal day such a bonfire shall be lighted as has not been seen for many a long year."

"But shall I be his?" were the only words that burst from Margaret's lips.

"His as truly in death as he is thine in life. What wouldst thou more? The consciousness of being loved should be thy hope, thy joy, thy life—it should be the very breath of thine existence, all-sufficient in itself; if it be not, thou dost not love, thou art unworthy of his love." Then, perceiving an involuntary movement of surprise on the part of its auditor, the figure, resuming its gentle, unimpassioned tone, added, "Lady, I have told thee all that it is permitted thee to learn, and must be uncourteous enough to bid thee quit my humble roof." Margaret, as she silently prepared to depart, tendered a purse to the mysterious prophetess. "Take back thy gold," was the haughty reply; "it cannot purchase happiness for me, it will be as bootless to secure it to thee. But keep this ring—I will claim it of thee when my words are fulfilled." A small white hand loaded with gems peeped forth from amidst the black draperies, and held a diamond of great value towards Margaret, who hesitated to accept it. "Thou believest in sorcery, fair girl?" asked the voice, ironically. "This ring is harmless in its qualities, fear not to wear it." So saying, she dropped it at Margaret's feet, and disappeared. The green light immediately faded away, and Margaret returned in safety to the castle.

(To be continued.)

As no character is more venerable than that of a wise old man, so none is more contemptible than that of an old fool.

New Books.

A Shilling's Worth of Nonsense.

The employment of irony is an efficacious mode of exposing folly and vice; and it is particularly so in dexterous hands, like those of the authors of the above little work, in laying bare the real motive when the action only has the semblance of virtue.

We cannot give a truer notion of the work than by quoting a passage or two from the introduction:—

"The writers (geniuses) of this little volume were standing some months ago on the quay at Dublin, attentively observing a pig-driver performing the arduous duty of embarking a herd of swine. They (the geniuses) were much struck with the process, evincing as it did the drover's profound knowledge of porcine nature, and his intimate acquaintance with the principles of Bacon. He (the drover), knowing the perversity of pigs, cleverly converted this unamiable trait in their characters into an accommodating virtue, for by pulling lustily at their tails, and thereby implying a wish to detain, the animal instantly became impregnated with a desire to advance.

"The geniuses could not help admiring the philosophy of the pig-driver, and were instantly impressed with the applicability of this contradictory process to the education of the human species. They became convinced, that from the proverbial pig-headedness of mankind the only true method of inducing them to go the right road was to urge them to pursue the wrong.

"Big with this great idea, the geniuses hastened home, and commenced reducing their new theory to practice."

By writing down a few hints on general subjects adapted to the pig-headed portion of humanity, thus:

PICTURES.

"'Know thyself' is an excellent axiom and roundhand copy. We would therefore recommend the heads of families to have themselves transferred to canvas and suspended in their apartments for continual self-examination.

"There are also other advantages attendant upon this practice. As it would be too expensive to appear every day in your best clothes, the portraits of yourself, blue coat and buff waistcoat, will afford those friends who have an opportunity of seeing you only in the week in your working-dress, of observing how very genteel you appear when decorated in your Sunday apparel.

"Should you be blessed with two grown-up unmarried daughters, you cannot do better than have their portraits 'done'; for the artist can introduce a stock of jewellery

and beauty not exactly the property of the young ladies; and, as first impressions are everything, some guileless swain may be struck with the charms of the portrait, and blinded to the blemishes of the original.

"If we were called upon to suggest a style of male portraiture, we would unhesitatingly select that of the gentleman in Regent-circus, who in a spirit of laudable ambition has set up his own likeness in rivalry to that of his neighbour the 'Bull and Mouth.'

"BENEVOLENCE.

"Benevolence should be cultivated by every noble mind, as there is nothing so conducive to permanent popularity as a proper exhibition of this enchanting sentiment.

"A charity sermon is a fine stimulant to a benevolent mind. As the donation which your generous feelings may prompt you to contribute is always received at the church-doors, this is undoubtedly one of the best methods of publishing to your fellow-parishioners the humanity as well as the liberality of your disposition.

"We have heard of other advantages attendant upon this description of alms-giving. Should any rascal have imposed upon you a half-crown which is a native of the Minories and not of the Mint, a charity sermon will be found a ready means of obtaining a good name, and getting rid of your bad money. You need have no fears that the charity whose interests you are anxious to promote would be any sufferer by the counterfeit which you have so liberally bestowed; for, rest assured, it would again obtain a ready circulation, as no one could be base enough to suspect that the trustees of a charity would ever dream of indulging in a little pious 'smashing.'

The woodcuts are numerous and good, but inferior to the letter-press.

Miscellaneous.

THE TWELFTH MEETING OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,

Manchester, June, 1842.

BY W. FRANCIS AINSWORTH, ESQ.

THE Annual Parliament of Science held its meeting this year at a town which is surpassed by none in the United Kingdom, in perfection of the industrial arts, and in mechanical skill and invention. The environs of Manchester are also rich in mineral treasures; the town is crowded with intelligent, active, and opulent persons, among whom are some whose fame is European, and these gathered (several hundreds in number) in the halls of science, to join with strangers and foreigners for one short week, in a glo-

rious labour, on which no worldly interests came to breathe anxiety, and with which no human passions mingled in saddening conflict.

The British Association distributes its members among many sections, each corresponding to a particular branch of investigation, and commencing with one the highest and most important, that of mathematics and physics. The contributions were also both theoretical and practical, or shaped into reports of progress, or of experiment and research, which latter often comprised the most valuable and efficient parts of the good accomplished.

It would be a work much beyond our limits, to follow the successive order of these communications, many read in the day, and that for several days in succession, and often commented upon verbally at considerable length. It is rather our wish to glean a few of the most prominent facts that distinguished this great anniversary.

MATHEMATICS.

The mathematical labours were of a generally high order; foremost among them, perhaps, stands Jacobi's communication on analytic mechanics, which was regarded by the president of the section as one of the most important announcements made in modern times. The principles developed by the learned professor related to the different problems on the motion of a system of material points, on which subject he announced, as the result of his researches, that whenever the forces have the functions of co-ordinates upon moving points only, and the problem is reduced to the integration of a differential equation of the first order, it may also be reduced to quadratures. The form preserved to the dynamic differential equations was that under which they were first presented by the illustrious astronomer-royal of Dublin, Sir W. Hamilton.

Next in importance came the communication of Professor Braschman, of Moscow, upon the principles of equilibrium and motion, in which he announced a new theorem on equilibrium and molecular forces.

ASTRONOMY.

Astronomy stands justly at the head of the physical sciences. The present meeting of the British Association, if it did not offer any very great and important novelty, was still one of triumphant congratulation at the termination of several long continued labours. It is well known, that from 3000*l.* to 4000*l.* have been expended by the association in furtherance of this branch of inquiry; and the manner in which this has chiefly been expended has been in the extensive reductions to be made for the formation of the Catalogue of Stars, formerly

known as that of the Astronomical Society, but now as that of the British Association; the reduction of the astronomical observations in Lacaille's Catalogue of the Stars, and of the stars in the *Histoire Celeste* of Lalande.

Mr. Baily read a report on the last of these reductions, the whole of which, with a few omissions, he stated, had been reduced, being in number upwards of 47,000 stars. Mr. B. also reported on the British Association Catalogue of Stars, in which the calculations of the proper places of the stars, with the logarithms of the proper constants, &c., are furnished for nearly 83,000 stars. Sir J. Herschell reported on the reduction of Lacaille's stars, made by a committee, and under the superintendence of Mr. Henderson, the whole of which work was now completed; and the resulting catalogue, arranged in the order of right ascension, was written out for the press. The number of stars reduced was about 10,000.

A part from these elaborate reports was a very valuable memoir on astronomical clocks, by Professor Bessel, of Königsberg, whom Sir W. Hamilton, in great modesty, places at the head of living astronomers. Mr. Talbot also communicated an important memoir on the improvement of telescopes.

Mr. Dent also made several interesting communications, chiefly on the subject of chronometers.

OPTICS.

The science of optics, which has attracted so much attention, and made so much progress of late years, was chiefly represented, on the present occasion, by Sir David Brewster, who made altogether nine different communications on the subject. These, in part, concerned the action of the media of different coloured rays; and contained an account of certain luminous bands in the spectra of various flames, of luminous lines in certain flames corresponding to the defective lines in the sun's light, and of the structure of a part of the solar spectrum, hitherto unexamined.

An important and interesting communication, which involved the much-debated question of the undulatory theory, was made by Sir David; in it he described what he considered as a new property of light—a polarity in the simple rays. The subject, although discussed at previous meetings of the association, was opportunely brought forward on the present occasion, as there were present most of those who, in this country, have devoted their attention to the investigation of the physical properties of light.

MAGNETISM.

The leading communication upon this very interesting branch of inquiry was the report, by Sir J. Herschell and Col. Sabine,

on the great system of magnetic and meteorological observations, carried on at the same time by naval expeditions and fixed land observations, a system which has been truly designated as the greatest combined scientific operation the world has ever yet witnessed. The report of progress was highly satisfactory. The extent of operations is now vastly increased, by new foreign establishments observing upon the same concerted plan, and at the same hours—by the adoption of a system of colonial and national magnetic surveys, based upon, and correlative with, the fundamental determinations at the fixed magnetic centres—and by the introduction of new instruments and processes of observation, affording great facilities for magnetic determinations both by land and by sea. The annual reports of the British Association could not be better modelled than after the present one on magnetism—business-like, and noticing every memoir and publication on the subject. In furtherance of the same branch of inquiry, there was also a communication from Sir Thomas Brisbane; another, by Dr. Scoresby, on improved permanent magnets, and the modes of determining their powers; and a further one, by Professor Marianini, on the magnetic action of momentaneous currents. In addition to these, Dr. Read made some experiments on magnetic polarity connected with electricity.

METEOROLOGY.

The number of communications in this branch of knowledge amounted to eight. Among these were two interesting ones on anemometers, by Sir D. Brewster and Mr. Snow Harris. We may also notice Mr. Nasmyth's application of the theory of definite proportions to the explanation of the theory of clouds, and Dr. Lamont's report of a great system of meteorological co-operation about to be carried on, on the Continent, from the Pyrenees to the frontiers of Persia.

TIDES AND WAVES.

These constitute comparatively new subjects of inquiry, and not less interesting from that circumstance. This year a supplemental report of the committee on waves was read by Mr. Russell, and referred to a third inferior class of waves, which were designated as capillary waves, in resulting from the same causes which give rise to the forces of capillary attraction. There were also some remarkable admeasurements given of the comparative length and velocity of common waves, which corresponded so closely with the Newtonian law on that subject as now to entitle the common wave to be distinguished as the Newtonian. In an able communication made by the same gentleman, on an abnormal tide wave in the Firth of Forth, it was stated, that from the

peculiar form of that Firth, the tides of which are principally due to the great northern tide wave which comes round the north of Scotland, curious results were produced in the form of the curve, the level of the low water at Alloa being, for example, far above the level of the high water at Crail; and the tide at Stirling (although the general range in the Firth was only sixteen feet) rose to the extraordinary height of thirty feet above the level of low water at the lower part of the Firth. Mr. Rook read a memoir on the tidal phenomena in the bay of Fundy and the river of La Plata, and Mr. Walker, of Plymouth, made a communication on the movement of oceanic waves in that harbour.

MISCELLANEOUS.

To be classed as such, comes one, perhaps, of the most remarkable communications made at this meeting of the Association. It was communicated by Professor Bessel, as the discovery of Professor Moser, of Königsberg, and related, that when a black plate, either of horn or agate, is placed below a polished surface of silver, at the distance of one-twentieth of an inch, and remains there for ten minutes, the latter receives an impression of figures &c. engraved on the former, which may be rendered visible by exposing the silver plate to vapour, either of water, mercury, or of other substances. This process takes place at midnight as well as midday, and the picture on the silver surface is to be called into sight even by a *breath*. Sir W. Hamilton called it scotography; but Sir J. Herschell asked, might it not be thermography.

CHEMISTRY.

The most interesting communication made in chemical science was Professor Liebig's report on organic chemistry, applied to physiology and pathology. The mere consideration of such a subject opens a new and wide field of inquiry. The report contained a vast number of curious and remarkable facts, many of which apply themselves to the interests of every one, and to the daily occurrences of life. We regret much, then, that our limits do not allow us to give an analysis of a paper of so much public value. In theoretical chemistry we may rank Professor Schönbein's communication on the electrolysing power of a simple voltaic circle; the result of various experiments made by the author, going to establish the fact, that voltaic effects may be produced without the solution of a metal, the usual source of voltaic actions, but by nitric and other acids. Also Mr. Joules' communication, in which he endeavoured to account for the heat evolved by the combustion of certain bodies, on the hypothesis of its arising from resistance to

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the conduction of electricity between oxygen and the combustibles at the moment of their union. Another interesting communication in chemical philosophy was Mr. Mercer's attempt to explain, on ordinary chemical principles, some effects hitherto described as catalysis. Perhaps the most important communication in practical chemistry was that of Dr. Playfair, in which he made known certain new oxides of metals, of the magnesian family. This memoir was of high importance to chemical geology. Next came three papers by the venerable Dr. Dalton, who was the lion of the Manchester meeting, on phosphates and arseniates; on microcosmic salt, and on a new and easy method of analyzing sugar. There were also papers on the influence of light on the germination of seeds, by Mr. Hunt; on the modes of production of sulphuric acid, by Mr. Blyth; on agricultural chemistry, by Dr. Daubeny; on Kakodylium acid, by Mr. Bunsen; and several others of practical importance. There was only one mineralogical communication, and that was by Professor Haidinger, being an account of the mineralogical and geological museum of the Imperial mining department, and which eloquently extolled the effects, in arresting the attention and challenging the admiration of an arrangement after the method of Mohs. This is certainly a novel claim of that method to philosophical consideration. Mineralogy itself does not appear to be, at the present moment, a popular science in England, and this may be attributed to several combining causes, among which stand prominent the fact, that the chemical method has never been efficiently made known in this country; secondly, that many of the leaders of the more popular pursuit of geology are but indifferent mineralogists, and consequently pay little attention to mineralogical geology; and thirdly, that our keepers of museums, more especially our national one, should not, for the adequate salaries which they enjoy, give, at least, short summer courses of lectures.

GEOLOGY.

If geology does not rank first among the sciences, it certainly enjoyed the advantage of the greatest popularity, and of the largest attendance.

The most important contribution in this branch of inquiry—although, perhaps, not the most important to the progress of the science—was, decidedly, the memoir communicated by Dr. Dale Owen, on the Western States of North America. The country to which the paper referred embraced Illinois, Indiana, a portion of Kentucky, and Ohio. In this large portion of country there were two coal-fields, one of which was nearly as large as Great Britain. It was truly remarked that such resources,

placed by Providence in the hands of an intelligent and industrious community, had promise of power and opulence in store which exceeded anything that the imagination dare picture to itself. As the special object of the author, however, in bringing the communication before the English public, was to have the identification established between those lower rocks on which the coal-fields rest, and those which support our great carboniferous series,—much discussion ensued upon these topics. Next in importance came the memoir of Mr. Griffiths, on the fossils of the mountain limestone of Ireland. The exact succession of the different members of the great formation which covers so large a portion of the sister isle, to the unfortunate exclusion of its associated rich coal-fields, has long been a desideratum to geologists, the more especially as it was hoped that the details would fill up certain lacuna existing in the perfect understanding of our own carboniferous limestones.

As the Association met in the heart of a great coal-field, it was natural to expect that much attention would be devoted to the subject, and it eliminated, in the first place, a most valuable and accurate paper from Mr. Binney, on the Lancashire coal-field, which supplied almost everything that could be desired for an accurate acquaintance with that formation. Some gigantic fossil trees, which had been found broken, but in an erect position, in cutting the Manchester and Bolton railway, had been carefully preserved for examination; and it was the general opinion of visitors that they were not, strictly speaking, dicotyledonous plants, as advocated by Mr. Bowman, but that they had decidedly grown *in situ*. In connexion with the same subject, Mr. Williamson read an argumentative paper on the formation of coal-fields.

The next important subject was the theory of elevations and disturbances, which was ably brought forward, in a memoir on the physical structure of the Appalachian chain, by Professors H. D. Rogers and W. B. Rogers. It excited much discussion, and caused many interesting facts to be eliminated.

The report of the committee for registering shocks of earthquakes in Great Britain states, that sixty shocks had been observed at Comrie, in Perthshire, during the last year, and recommended that a person be employed, at that remarkable station, to observe further. The nature of the instruments used were described. The places most liable to earthquakes were situated along the lines of elevation, as at Falmouth and Chichester, and at Swansea, in South Wales. The two leading geological reports were those of Professor Owen, on the fossil mammalia of Great Britain,—the publication of which

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will be a subject of congratulation to all geologists,—and that of Professor Johnson, on chemical geology.

The glacial theory, the hobby of the day, was not passed over in silence. Dr. Stark communicated a memoir on the structure and mode of formation of glaciers, in which he overlooked the artificial divisions of firm névé, &c., and argued that there existed no constant differences in the crystalline structure of ice in different parts of glaciers; a view of the case which must, in theory, be correct, if we consider the elementary form of ice, as shewn by the researches of French and English crystallographers, to be an octahedron, and the common form a super-induced rhomb. The author's views concerning the origin of the superinduced ribbon structure, were also very interesting.

Mr. Hawkshaw read a communication on the footsteps of the great animals of the toad species which trod the earth in the time of red sandstones. These animals were once as large as camels, but they gradually dwindled in size, even at that early epoch, as was ably shewn by the author, till the circumstances became so unfit for the propagation of an animal abhorrent to man, as to appear in the present day to have attained a point proximate to total annihilation.

ZOOLOGY.

There was not much done in this section. We shall briefly recapitulate the chief results under their proper heads of *Mammalogy*, in which class, we can merely notice a memoir by Dr. Hodgkin, on the "Races of Men;" and the exhibition of a gigantic pair of the horns of the Wapiti deer. *Ornithology*—Mr. Couch read a memoir on the migration of birds in Cornwall; and Mr. Blackwall, a list of summer birds observed in Denbighshire. *Ichthyology*—Dr. Richardson read a description of a new genus of fishes, called *Machaerium Subducens*, from Port Essington, in New Holland. The same naturalist read a report on the ichthyology of New Zealand, which contained descriptions of seventy-seven species. *Invertebrata*—Mr. Blackwall communicated a curious notice on the palpi of spiders, in which he stated that the full development of these organs indicates a maturity in male spiders. Mr. Moore exhibited specimens of the parasites of salmon and carp, which led to an interesting discussion. Mr. Peach announced, that the so-called "sea cup" was not the product of the *turbo littoreus*, but of the *purpureus capillus*, and that the *patella levius* is the young of the *patella pellucida*. Among the miscellaneous papers belonging to the same class, was the report of the committee on zoological nomenclature. A report also of the committee for the preservation of animal and vegetable substances, which reported most favourably on the solution of

the subcarbonate of potash for such purposes.

BOTANY.

In this branch of knowledge, interesting papers were read by Professor Royle, on the growth of cotton in India; on the means of promoting the growth of plants, by Mr. Webb Hall; a paper by Mr. Reade, opposed to Liebig's theory of fallows; a notice of an irregular production of flowers in an aloe, at Ham Court, near Bristol, by Professor Daubeny; and the first report from the committee on the growth and vitality of seeds.

STATISTICS.

Many of the statistical papers led to results of considerable interest and importance. There were among these, five papers on vital statistics, in which Manchester and its cotton-spinners were included; two papers on criminal statistics; three on the statistics of colleges, academies, and schools; two on the loan funds and monts de piété in Ireland; the registers of the collegiate church, Manchester; the statistics of Plymouth, &c.

MECHANICAL SCIENCE.

There were no less than twenty-nine communications read at this section, all of which contained some practical fact of greater or less importance. Besides the report on railway sections, there were also connected with the same subject, a memoir, by Mr. Vignoles, on the axles of locomotive engines; and a paper by the same author, on the best form of railway bars, and on the upper works of railways generally; a memoir, by Mr. Nasmyth, on the strength of hammered and annealed bars of iron and railway axles; Mr. Smith, on an improved steam boiler; and Mr. Russell, on an index of speed for steam vessels; a memoir on floating breakwaters, a subject which has assumed a national importance; and one on the application of beton and concrete to the construction of breakwaters; three papers on the strength of materials; another on the ventilation of houses; on a self-acting wear; on the pressure of earth against walls; a memoir, by Sir J. Robison, on making street-paving blocks from round timber, now proposed in Paris; a report on the form of ships; and another on iron, as a material for ship building; on a new mode of raising water; on producing artificial threads or filaments for weaving; Mr. Brockden, on new patent stoppers; Mr. Vignoles, on Clegg's dry gas-meter; and lastly, two papers, besides one read at the chemical section, on the interesting subject of the efficacy of plans for abating the smoke nuisance, and the consumption of smoke. There is now in Manchester an especial association for determining the merits of the

THE MIRROR.

various plans, which are now forty-two in number, submitted as effectual for this purpose, and its operation has been further assisted by a grant from the British Association.—*Ainsworth's Magazine.*

WYER'S CAVE, VIRGINIA.

(Continued from p. 88.)

JACOB'S LADDER, THE INFERNAL REGIONS, ETC.

BEYOND this we passed through a long and irregular strait, called the Narrow Passage, which is fifty-two feet in length, from three to five feet in breadth, and from four to eight feet in height. At the end of this we found a descent into an open space on a lower level, to which we went down by a natural flight of steps, called Jacob's Ladder. As in this comparatively small apartment they have made all things bend to this patriarchal nomenclature, they have absurdly enough called one of the objects Jacob's Tea-table! and another, Jacob's Ice-house! From hence we passed again through another narrow passage, and by it reached a dark, gloomy apartment, called the Dungeon; the whole depth of this from the top of the ladder being about thirty feet.

From this we passed into a room, where a singular formation of a large horizontal sheet projects out from the wall half way across the apartment, like an upper floor, constituting, as it were, a gallery to the apartment below. This, no doubt, suggested the name given to the place, which is called the Senate-Chamber; and this again, most probably, led to the name of the adjoining room, which is called the Congress-Hall. This room is an irregular circle in shape, of very uneven floor, and in some portions about thirty feet in height. In one part of it is a large sloping mass of rock, which resembles in shape, though miniature in size, the promontory on the Hudson river, called St. Anthony's Nose, and hence this projection is called by the same name; while a small gallery above is denominated the Lobby, as an appendage to the Hall.

On the right of this, to the north, is a vast, deep, and dark recess, into which, it is said, no one has yet descended, so as to explore it thoroughly, from the air being found impure by those who have gone into it a little way, and it has the forbidding appellation of the Infernal Regions.

WASHINGTON'S HALL, THE PYRAMIDS OF EGYPT, ETC.

AT the end of the Congress-Hall, an ascending flight of steps, about seventeen feet in height, leads the visitor up to the narrow passage called the Lobby. It is said, that from this place there is an upper channel, leading all the way to the end of the Cave,

but the larger and more beautiful apartments being below, the guides descend from hence by another flight of steps, about seventeen feet in depth, and bring you to one of the largest and most beautiful apartments of the whole, called Washington's Hall. Like the great Ball-room, its floor is nearly level throughout, but it is of much greater length, of almost uniform breadth and height, and perfectly straight from one end to the other, its dimensions being 257 feet in length, from 15 to 20 feet in breadth, and about 30 to 35 feet in height. Nearly in the centre of this noble Hall is a large stalagmite, with accumulations of calcareous deposit, rising up from the floor to a height of about seven feet. When the guides advance before the visitors, and place their lights around this, at a little distance, it looks so like a fine marble statue clothed with flowing drapery, that there is great difficulty in persuading yourself that it is not a work of art, the material having that yellowish hue which old statuary marble exposed to a damp atmosphere acquires, and the form being such as to represent a hero or a warrior, surrounded with his robes of state.

The sides and roof of this apartment are full of beauties; and the columnar and other masses of stalactitic matter are so diversified in form and combination, that they have suggested the following very different and very distant objects as being more or less represented.—The Crucifixion is the name given to three upright stalagmites, the central one taller than those on either side, and resembling the Saviour crucified between two thieves. The Rock of Gibraltar is represented by a huge mass of broken and fretted rock, not unlike the great original in shape; while the very narrow passage which lies between it and the adjacent mass, is called the Straits of Gibraltar. Within these Straits, and behind the Rock, is a formation, of a tapering shape, called the Pyramids of Egypt; and at the farther end of the Hall are some lofty spiral columns, which are called, respectively, Pompey's Pillar and Cleopatra's Needle. This again led to the naming two of the shorter stalagmites of the statuary kind, Julius Cesar and Marc Antony. One of these spiral columns, however, of considerable height, leaning over several degrees from its perpendicular, and seeming in the act of falling, we proposed to call, from its resemblance to the great original, the Leaning Tower of Pisa.

Leading off from Washington's Hall are two small but highly interesting apartments, the first of which, near the entrance on the left, is called the Theatre, from the several beds of stalactites having formed themselves on different levels or elevations, resembling, in some degree, the subdivisions of box, pit,

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and gallery ; while, to make the theatrical arrangement complete, a small adjoining aperture is denominated the Green-Room.

LADY WASHINGTON'S DRESSING-ROOM—
THE CHURCH.

The second of these apartments, leading out from the Hall, and having its entrance nearly opposite to Washington's statue, is called Lady Washington's Dressing-Room ; and in this is one of the most extraordinary formations to be found in the whole Cave. This is a mass of sheet-stalactite, which leans off from the wall at a distance of about a foot at the top, gradually lessening in distance till it touches the wall at the bottom. In shape, it is nearly a square, rounded off at the corners, being about three feet in diameter each way. It resembles, as much as possible, an old-fashioned mirror, placed against the wall, touching the wall at the bottom, but leaning off from it at the top, so as to admit of the spectator seeing his image reflected at the proper angle ; and this mirror, moreover, is placed just at the proper height, as well as at the proper angle of outward inclination, to serve the purpose of a toilet. How, or in what manner, this singular formation was produced, I could form no idea on the spot, and all present confessed themselves at a loss even to conjecture. In the same interesting apartment is a recess, called the Kitchen ; a hollow in the wall, called the Fire-place ; and a little tabular bench, called the Toilet, close by the mirror, around which are folds like drapery, and all this in the hard concrete matter, of which the whole of the interior of the Cave is formed !

From this chamber we returned to Washington's Hall, and, proceeding on to the end of it in a south-west direction, we reached a narrow passage, the height of which is considerably less than that of the Hall. Here we found a descent of about ten feet, after passing a little recess on the right, called the Bar-Room, from its possessing a pure and limpid spring ; though, unhappily, the fiery liquid furnished by the poisonous and intoxicating fountains of bar-rooms, is so unlike the crystal water obtained here, that the name is most inappropriate.

Going down this descent of about ten feet, by steps prepared for the purpose, we landed in another large apartment, called the Church. This is 152 feet in length, from 10 to 15 in breadth, and 60 feet in height, and is altogether very splendid. At its entrance, on the left, is a mass of rock, so glittering with the profusion of small crystals formed on the surface, that it is called the Diamond Bank. At the further end of the Church is an elevation, called the Choir, over which rises a fine whitish spiral column, springing up to a

height of about 40 feet, and called the Steeple. About the centre of the church, in length, is a recess, high up in the wall, which is called the Gallery ; and behind this, but in full view from below, are a number of perpendicular and columnar stalactites, varying in diameter like the front pipes of an organ, and giving out when struck, or when a stick is drawn rapidly across them in succession, a variety of sounds at the pitch of different notes, grave or acute, according to the size of the pillar, and hence this is called the Organ. To give due honour to the illustrious Lafayette—who, in the minds of every American, is justly associated with Washington,—the General has a seat assigned to him in this church, which is called Lafayette's Pew.

Returning back a little through the church, and turning to the left, we entered a very spacious, but not a remarkably interesting apartment, which is called Jackson's Room, in honour of the late President. From this, a narrow passage leads to a circular hollow recess, called the Confectioner's Room, from the resemblance which certain of the short thick columns there bear to sugar hogheads.

THE GARDEN OF EDEN, ETC.

GOING back again from thence to the church, and proceeding towards its further extremity, near the steeple, we turned off to the left in an easterly direction, by a narrow strait, into a circular recess, which is called the entrance to the Garden of Eden ; and where a lofty and inaccessible rock has received the name of Mont Blanc. From this, a second narrow passage conducts the visitor into the Garden of Eden, which is extremely beautiful ; the stalactites depending from the roof, and the stalagmites ascending to meet them from the floor, being here more numerous and more perfectly corresponding than in any other part of the Cave. Some of the formations are so singular, that one has received the name of the Banian Tree. This stands near the entrance to a small recess leading out from the Garden of Eden, named Adam's Bedchamber. The Banian Tree is enumerated by Milton, in the *Paradise Lost*, as one of the trees of the Garden of Eden, and no tree could be better represented by the stalactitic formations, than that which he thus describes :—

" So counseled he, and both together went
Into the thickest wood ; there soon they chose
The fig-tree, not that kind for fruit renown'd,
But such as at this day, to Indians known,
In Malabar or Beccan spreads her arms,
Branching so broad and long, that in the ground
The bended twigs take root, and daughters grow
About the mother tree,—a pillar'd shade,
High overarch'd, with echoing walks beneath."

PARADISE LOST, Book ix.

Buckingham's America.

(To be continued.)

THE HILL OF THE THREE SISTERS.

A COSSACK LEGEND. BY W. J. THOMS.

In the neighbourhood of the village of Halschinjetz, not far from Berditschew,* there rises a hill, the foot of which is traversed by several roads running in different directions; its summit is thickly covered with weeds and stunted briars, while in its bosom there are buried numerous relics of by-gone days. Many and varied are the traditions concerning it which have sprung from the teeming imagination of those whom business or amusement has induced to resort to it. The children of the neighbourhood, who at the time of the summer solstice go there in search of glow-worms, oftentimes see strange forms arise out of the underwood, which gradually increase till they form one huge ball of fire, which then rolls slowly towards the village. The affrighted youngsters hide themselves as quickly as possible in the surrounding rushes; but as soon as the phantom fire becomes stationary, they rise on tip-toe, give the signal one to another, and burst forth into a loud shout. The flame gradually gets paler and paler, until at last it vanishes into air. The little victors return with merry steps back to their play place, when lo, a fresh troop of phantom fires arise from the earth, and after following for awhile the astonished children, remain steadfast; at which taking fresh courage, they boldly attack the phantom and stamp it out. Thus they while away the time in contests with the spirits, which furnish them, when they turn homeward, with materials for strange tales, which they do not fail to enrich with many wondrous imaginings. The good housewives of the neighbourhood whisper cautiously to one another hints about witches and sorcerers; but the men, on the contrary, when the hill and the mysterious fires are spoken of, pretend great ignorance upon the subject. None of them ever venture to ascend it after nightfall; and the unhappy villager who is at that time compelled to pass its foot, finds his blood run cold, his hair stand on end, and his limbs trembling with a deathlike chillness.

In Halschinjetz, the venerable Lewko was the only person who ever mounted the hill, for his hut lay close by; but he never conversed with any one respecting that unhallowed spot, or the phantoms which so frequently appeared there.

Late one evening—it was the vigil of St. Michael—Lewko sate on the hill-top. Now his eyes were directed towards the village,

* Berditschew, a city in the Principality of Radzivill, seated on the river Giulopiat, containing 20,000 inhabitants, where the principal part of the commerce between Germany and the South of Russia is carried.

now was his forehead almost buried in the earth—which he kept digging up with a stout staff, as though he would dig himself an entrance into the world below, and learn from what had passed away a knowledge of the future. A hollow wind sounded mournfully as it rattled through the withered grass, and he occasionally struck a few loud notes on the strings of his balabaika,* which lay on the ground beside him; and the tones which he called forth sounded as though they would, by their divine harmony, uphold the seer in weaving his fantastic web. The clouds passed rapidly; and as a goodly company of steel-clad knights passing by a spectator display to him a glittering helm, or a burnished spear shining through the dust which they stir up, so ever and anon did the beams of the moon or of some glittering star shine forth from the blackness which surrounded them. At the foot of the old man lay a milk-white greyhound, his hind legs closely drawn up, his fore legs stretched out before him; his serpent eyes rested on the earth; he stirred at every sound, and listened, half pricking up those ears which fell like silken hangings on each side of his graceful neck—then looked up into the face of his old master and wagged his tail.

At length a cock was heard to crow the midnight hour at some neighbouring farm;—at this sound, a dog in Halschinjetz began to howl; so did a second, and a third, until the howling was heard to extend from the village all over the surrounding plain.

Just then two riders on coal-black steeds sprang from a doorway as hastily as if they were in search of the head of the Khan of Tartary, or the treasures of the Grand Duke. The noise of their horses' feet approached nearer to the old man; he listened, and heard a sound as though something had fallen to the ground. The greyhound started to his feet, and would have darted forward, but being checked by a low whistle from the old man, stood stretching out his neck in the direction from which the sound proceeded. Lewko now saw two horses standing at the cross road, and two men ascending the hil: he hallooed to them, and as they returned his cry, the echo spread far and wide around them.

The men approached and exchanged greetings. "Now, Father Lewko," said one, "here we are; will you keep your promise?"—"What is once promised," answered Lewko, "that must man fulfil." But if ye would hear the tale, so must you needs believe it—for if the woman gets angry and mutters a curse against you,†

* Balabaika, an instrument of four strings, something like the ancient theorbo, the tones of which are very agreeable.

* Literally, "bespeaks you," or brings down misfortune upon you by muttering charms. This belief is so deeply and firmly rooted throughout

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woe befall you. It is an easy matter to raise the devil, but not so easy to escape from his clutches. But to my story.

"In those happy days when Bohdanko led the Cossacks, and Poles, Tartars, and Zaporagians feasted together at the table of the Hetman in Trechtymirow—the city which King Stephen Batori bestowed upon the Cossack people,—in those happy days, when three mighty people combined to bridle the insolence of the border chieftains, there was a farm at Kodenka—yonder, where you see that black alder tree, which belonged to the Dudar family,—the earthen dyke which surrounded it is not yet levelled.* There stood a hut, in which dwelt a woman whom they called Sukuricha. Some said she was a witch; others called her a prophetess; for she healed diseases, dealt in charms, called down hail and rain, made rich lands barren, and scattered good luck with the one hand and misfortune with the other.

"Now Sukuricha had three daughters, sprightly and graceful as nimble, and active as wild cats; the redness of their cheeks was like the moss-berry on the dazzling snow, when the sun shines bright. When they began to sing, the nightingale would listen to their songs, and when they were ended would try to warble forth the same sweet melody. If they moved their little feet in a measured dance, the very earth quivered with joy. Thus their days passed without care and without sorrow; and all the youths of the neighbourhood flocked around them, like flies round honey. How blest was he who opened the dance with one of these fair ones!—did one of them but fasten a golden floweret in his bonnet, his good fortune seemed unbounded; yet the hearts and affections of these maidens remained as free as the flight of the bird through the air.

"One fine summer's afternoon, they were seated in the house-porch, spinning and talking over the last Sunday's dance, when they saw three horsemen riding by. The gate of the court-yard was open, and quick as an arrow, with a deer-like bound, a Cossack, mounted on a horse of the desert, sprang into the middle of it. The youngest of the sisters gazed upon the sunburnt face of the rider, and upon his waving kolpak, (head-dress,) and her heart fluttered, and

the whole of the Ukraine, that mothers are afraid to shew their children, huntsmen their hounds, horsemen their horses, mechanics their work, to any stranger, from the fear that they may be "spoken to."

† In the Ukraine, every house, with the fields &c. belonging to it, is separated from the others by an earthen dyke or wall—which is renewed or repaired every year—and supplies the place of the green hedgerow, which in England not only serves as the landmark, but adds so greatly to the beauty of the scenery.

her cheeks grew as red as blood, even to her very ears. He was immediately followed by a Tartarian Mirza, whose horse seemed as if it were swimming—so easily and so gently did the beast lift its nimble feet over the earth. The second maiden beheld the black eyes of the Tartar, and his rich dress of silvery fur, and her heart beat violently in her trembling bosom, and she cast her eyes upon the ground. Close behind them rode a Pole, so skilfully that he made his good steed prance and beat the air with his fore legs, so that his haunches rested on the ground—and the eldest of the sisters gazed upon his glittering arms, shining helm, and cheerful countenance, and her heart beat for very joy, and she bestowed a look of womanly love upon the smiler.

"Now what could these maidens do? Their mother was from home, and the rights of hospitality were claimed. The strangers were kindly invited to fasten up their steeds and enter the dwelling, where their skilful hostesses soon laid before them refreshment—cream and pickled cucumbers. The behaviour of their guests was courteous in the extreme, and in each of them a thousand agreeable qualities were soon discovered. Coyness at first limited their conversation to brief questions, and answers just as brief—but this did not last long; the jest and the laugh went round, though oft there was no other cause for it than some whimsical fancy of the minute; then followed gentle words, arrow-like glances of the eyes, and lastly, an innocent kiss, stolen as it were in fun. It may readily be believed that they were in no hurry to resume their journey.—' You will travel more pleasantly in the cool of the evening,' said the maidens—and one word from a pretty mouth is a command to a brave man.

"The whole party indeed felt as delighted, as overjoyed, as though Paradise were their dwelling place—when suddenly, their joy was interrupted, as it were by a thunderbolt, by the return of Sukuricha. Not kindly did she welcome her guests; and as she stole a sidelong glance at the burning cheeks of her daughters, her eyes were as full of venom as those of an adder whose lurking place is disturbed by man. The young men tarried but a little while ere they departed; and as they journeyed on, they spake not a word, for sorrow weighed heavily upon their hearts, and their thoughts were fixed on those they had left behind them. The Cossack dreamed, probably for the first time in his life, of the joys and advantages of a married life,* and resolved at the next gathering together of his people to

* The laws of the Zaporagian Cossacks did not allow any of the tribe to marry, nor any woman to reside in the encampment, or within two miles of it. Any man desiring to marry must strike his name out of the register of the tribe.

lift up his voice and try whether he could not do away with the law forbidding marriage. The Tartars weighed against one another the doctrines of Christianity and of Mahomed the Prophet, and at last came to the conclusion that the followers of both bowed themselves before the same Supreme Creator, and that a difference of belief ought not to hinder the alliance of those who loved one another. The Pole wished earnestly for equality of rank, regarded as a mere toy his family arms—a black raven on an azure field,—went back to the time of Adam and Eve, and at last satisfied himself—‘We are all children of the same parents, are all brethren: Nature has not made one better than another.’ Bused with such childish fancies, they at length reached Berditschew, where they separated. They were never heard of more.

“From this time forth, however, sorrow and lamentation filled the dwelling of Sukuricha. The chiding of the mother, the silent tears of her daughters, banished peace, which fled like the dove from a house in flames; the charms of the maidens withered like flowers in the frost of harvest. They died one after another, yet without disburdening their consciences; the churchyard was closed against them; the old woman buried them in this spot,—she raised a mound over their corses, and murmured over them unintelligible words of mystery. No flower, no garland, marked their graves, which remained as fresh as if they had been dug but yesterday, and waited for their prey.

“Six years passed in this way. Every night was old Sukuricha seen with her dishevelled hair hanging in tangled locks, her countenance so withered that the very bones seemed starting through her skin—making her circuit round the graves of her children—and at the very hour of midnight scattering grains of corn towards the south and towards the west: from the convulsive motion of her lips it was plain she muttered her incantations, yet no one dared venture near enough to hear what she said, or see exactly what she was engaged in.

“Everything on earth changes;—now are nations at peace; now again are they at enmity. The alliance of the three nations had been rent as readily as the web of the spider. Hordes of Tartars, after having plundered Moscow, advanced towards Poland. The Diet resolved upon a general levy; the royal decree was quickly published; the nobles rose in arms; the whistle of the Hettman was heard,* and his war-like people ranged themselves under his

* When the Hettman of the Cossacks receives the royal command to assemble his troops, he appears in the front of his dwelling and whistles; the kettle-drums are immediately beaten, and the whole horde put themselves under arms.

banner at the sound of the trumpet. They took the field. Fear and consternation led the way,—murder, fire, and desolation followed in the rear.

“Was it mere accident, or the work of supernatural power, that the horde of Cossacks pitched their tents on the very spot where the Three Sisters were buried? Be it as it might—they had scarcely dismounted from their saddles, when a body of Hussars burst upon them. Hard was the fight; the blood of both was shed in abundance, yet could neither claim the victory. At that moment, big with fate, the Cossack host rode into the field and levelled their lances against the Mussulmen. The Tartar horde fled like a cloud of dust towards Berditschew, in hopes of there crossing the river which flowed through the vale.

“The battle field was strewed with the bodies of the dead, as a harvest field with the thick corn; yet neither party could boast of victory, since the leaders of the three were slain. Sukuricha alone—dressed as if she had been bidden to a wedding feast—shewed herself at nightfall, and gazed without a sign of feeling upon the scene of carnage. When, however, she saw the leader of the Cossacks lying dead upon the grave of her youngest daughter, and recognised him as one of their three guests, she burst into a wild laugh, and spurned him contemptuously with her foot. Then discovering another of them in the Mirra of the Tartars, she seized the corpse by the hair of the head, clotted as it was with dust and corruption, and with infuriated hands dragged it to the grave of her second daughter, moistening the earth as she did so with the blood of the Mussulman. She then searched among the dead bodies of the Poles; and when she had found him who had been beloved by her eldest daughter, when he sprang on his well-trained steed into the court-yard of their dwelling-place, she seized it in her withered claws, even as a hawk seizes a sparrow, and with nimble feet bore it, shaking and bending, for it was yet warm, over the heaps of dead, and threw it upon the grave where her firstborn was buried. Then ascending the hillock, she clapped her hands with the glee of a child whose wish has been fulfilled, and disappeared. Whether she sank into the earth, or vanished into the air, no one knows; but she was never more seen. One who had from a place of concealment watched her proceedings, as soon as he recovered from his fright, related what he had witnessed to the inhabitants of the village. Men and women assembled with spades and mattocks, laid the bodies of the fallen, without distinction of nation, by those of their leaders, and raising a mound over them, named it the grave of the Three Sisters.”—*Monthly Magazine.*

A SUPPOSED DEMONIAC.

In the course of last year, a woman, named Raquis Chaudoreille, living in a village a small distance from Montpellier, became lunatic, her chief symptom being an unnatural antipathy to fire and fear of being burnt. Having been under various modes of treatment without benefit, she and her friends attributed the malady to the witcheries of an old carpenter, named Salles, who lived for some time in the same house. To him the husband of the unfortunate woman applied, threatening to murder him if he did not exorcise the devil with which he had possessed his wife. Salles denied the supernatural powers the foolish people believed him to be endowed with, and refused all their importunities. Recourse was then had to another reputed witch, a woman named Conte, living at Montpellier, who undertook the case; and having taken up her residence for a week in the house of the lunatic, she, probably by the moral influence she obtained over the mind of her patient, produced an apparent cure. For this she received a fee of forty francs, and presents of large baskets of fruit. The effect of her treatment, however, disappeared soon after she quitted the house, and the symptoms of lunacy returned. Upon this, application was made to the curé of the parish, as a more regular exorciser of demons. The worthy priest had confidence in his own powers, but durst not exercise them without permission of his diocesan. At first, it is said, the bishop refused his sanction, but at length gave way to importunity, and assented. The day for the performance of the exorcism having been fixed, the curé shut himself in the chamber of the lunatic, while the house was surrounded by the congregated inhabitants of the village. One of them, a man named Carrière, got a ladder, and, raising it to the window of the chamber, ascended, looked in, and gave to the people below the following, as an account of what was passing within:—"Satan! Satan!" said the curé, "come out of the body of the woman!" The devil replied, "I am about to depart." "Wilt thou go out by the window or the door?" asked the curé. "By the window," replied the devil. Upon this, Carrière bent down, as if to allow the demon ample room to escape without touching his own head, and the assembled rustics set up a cry of terror. Satan, however, did not come forth, and Carrière related the continuation of the colloquy between the priest and the woman Chaudoreille, who indicated the *pot à colle* (the glue-pot)—meaning thereby the carpenter, Salles—as the sorcerer who was the cause of all her misery. A man in the crowd, upon this, cried out, "We must make a fire in the market-place, and burn

the *pot à colle!*" This motion was not seconded, but Salles became so alarmed by the scandalous odium thrown upon him, that he laid a complaint before the magistrates. An investigation was entered into by the law officers, who instituted a prosecution against the woman Conte for fraud and deception, and against the husband of the woman Chaudoreille and Carrière for scandalizing Salles. They were brought to trial on the 19th instant, before the Correctional Tribunal of Montpellier. Chaudoreille and Carrière were acquitted; but the woman Conte was sentenced to three months' imprisonment.—*Galignani's Messenger.*

CAOUTCHOUC PAVEMENT.

THIS is an admirable invention, for which we are indebted to Mr. Richardson Fanshawe, of Hatfield-street, Blackfriars. The pavement is composed of caoutchouc, combined by mechanical means with suitable materials; for which method, as well as for its application to the purposes of paving, patents have been obtained. The composition thus made forms a firm, substantial, and elastic pavement, which has borne without injury the severest tests of pressure and of wear and tear. Caoutchouc (India rubber), from its extreme ELASTICITY and generally supposed high price, appears, at first sight, a very unlikely article to be brought into practical use as a pavement; but the patentee is happy to announce that, though opposed by violent prejudice, and placed under the most disadvantageous circumstances, he has proved that it forms the very best material that has hitherto been introduced for the floors of kitchens, cellars, halls, and passages; for court yards, carriage roads, gateways, garden walks, footpaths, &c.; for the facing of damp walls and foundations. And as rats and other vermin cannot possibly penetrate through it, it is well adapted for the floors of granaries and malt-houses, as also for the yards of distillers and brewers, where it will effect a great saving in the wear of casks. But for the floors of stables it is superlative, from its evenness of temperature, its resistance of humidity, its soft, elastic, turf-like feel, and its non-liability to fracture and throw up sharp angles (like bricks, stones, or Dutch clinkers, usually employed), sometimes to the serious injury of the animal, in addition to which advantages, where employed as a flooring material for stables, that of the great saving in litter effected by it is one of great importance. It is devoid of smell, is laid down cold in blocks like foot tiles, cemented together at the edges, so that the whole becomes like one piece without a joint. It is not as inflammable as a boarded floor. The price will be

about the same as the best asphalte pavement. It is so elastic that it will not fracture with the heaviest blow, which property prevents its wearing away. It can be altered, repaired, or relaid, at a small expense, as the old material can be taken back and reworked. The patentee expects an extensive use of this article in the shape of bricks for sea and wharf walls, and for vaults, tanks, &c.; also as a protecting covering to piles, especially where they are liable to be destroyed by the worm.

We have understood that many persons of high rank have ordered their stables to be laid down with the caoutchouc pavement, the advantage of which to the *feet of horses* must immediately suggest itself to all.—*Polytechnic Journal*.

The Gatherer.

Strong Sympathy in the Dog.—An interesting instance of this feeling in the canine species, the authenticity of which may be relied on, lately took place, or rather is still proceeding, at Invergeldie, a large sheep-farm on the estate of Lawers, near Comrie, Perthshire. The overseer became severely indisposed, and for the first ten days after their master had taken to bed, his two faithful collies refused to be comforted, mournfully declining all sorts of food, nay, even milk warm from the cow at last pressed upon them by the domestics. At length their case became so serious—for they were otherwise valuable dogs—that the overseer's mother was prevailed upon to inform her sick son, though at the time very low, of the circumstance, begging of him, as a *dernier ressort*, to try what effect his own word would still have upon the mute mourners. By an effort, he succeeded in a weak voice to name his favourites, pointing at the same time to some food placed at hand for the trial. This gentle command had its effect; the dogs at once obeyed, and have since, as if it were still repeated to them, which it is not likely ever to be again, continued to take as much as supports life; but once every day at least, and oftener if opportunity offer, they glide together into the room where the sick man is, slip stealthily to the bedside, raise their fore paws upon the bed-clothes, and in this attitude continue together for some time to gaze intently on the pallid features of their now unconscious master, and then drooping retire out of the room.—*Stirling Journal*.

Immense Steam Vessel.—The Lords Commissioners of the Admiralty have ordered Mr. Oliver Lang, master shipwright of the Woolwich Dockyard, to submit a plan of a steam-vessel of 1650 tons burden, and suitable for engines of 800 horse power, with a crew of 300 men.

Music for the People.—For popularising music it cannot at first be presented in too simple a form, and elaborate and complicated fugues perplex without interesting the beginner. On this subject, too, an error has sometimes been disseminated by those who contend that the taste should be exclusively cultivated for what they term the "best style" in music, which they define to be grave and ecclesiastical. We believe the best style in music is that which best accords with the feelings required to be expressed, and very different styles are therefore best under different circumstances. Music most appropriate to divine service in a cathedral, it would be in the worst possible taste to introduce in a drawing-room, after a country dance or quadrille. We admire the hundredth psalm at church, but deem it torture to hear a bird taught to whistle it, or little children to sing it (crying), in an infant school. There is a time for all things, but no one style of music can be equally suitable for all times; times when the heart is grave and sad, and when it is gay and merry. What we most desire for the people is music of that character which would tend to throw a cheerful influence over the various pursuits of industry.—*Westminster Review*.

Ductility of Glass.—The conservator of the Museum of Avignon has remarked, that all the glass vases found buried at Vaison were so soft and ductile when first discovered, that they might be kneaded up, and cut with a knife-blade, but that they assumed the fragility and hardness of common glass, after a few hours exposure to the air. This remark applied only to the vases buried at a depth of at least three metres.

MAXIMS.

If you act only with a view to praise, you deserve none.

Of all virtues, patience is most frequently wanted.

Quarrelling never takes place without folly on one side or other, or both.

There is nothing more foolish than for those to fall out who must live together, as husband and wife; and such near relations.

If you are ever so sure that you ought to resent an injury, at least put off your resentment till you cool. You will gain the end better by that means, and can lose nothing by going to work with deliberation; whereas you may do yourself great mischief by rash procedure.

Be open with prudence, and artful with innocence.

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